

I claim:

1. A tunable, reconfigurable optical add/drop multiplexer comprising:
 - (a) a first signal routing component; and
 - (b) at least one wavelength selective switch device having an input port and an output port, said input port being optically coupled to said first signal routing component, said wavelength signal selective switch being wavelength tunable, so as to allow a selected wavelength to be routed to said first signal routing component and the rest of the wavelengths to be routed to said output port.
2. The tunable, reconfigurable optical add/ drop multiplexer of claim 1 wherein said selected wavelength is reflected towards said first signal routing component.
3. The tunable, reconfigurable optical add/ drop multiplexer of claim 1 wherein first signal routing component is a circulator.
4. A reconfigurable optical add/drop multiplexer according to claim 1, further comprising a second signal routing component coupled to said output port.
5. The tunable, reconfigurable optical add/drop multiplexer according to claim 1, wherein second signal routing component is adapted to route an additional selected wavelength signal to said selective switch device through said output port.
6. The tunable, reconfigurable optical add/drop multiplexer according to claim 1, wherein said first signal routing component is an optical circulator.
7. A reconfigurable optical add/drop multiplexer according to claim 1, wherein said second signal routing component is an optical circulator.
8. The tunable, reconfigurable optical add/ drop multiplexer according to claim 1 wherein said wavelength selective switch device includes a wavelength tunable grating.
9. A wavelength tunable switching device comprising:
 - (a) an input port and an output port;
 - (b) a first optical waveguide;

(c) a second optical waveguide, said second optical waveguide having a wavelength tunable, wavelength selectable optical component;

(d) a first switch selectively coupled to said first or said second optical waveguide for coupling signal light from said input port into one or another of said waveguides; and

(e) a second switch selectively coupled to said first or said second optical waveguide for coupling said signal light from one of said first and second optical waveguides into said output port.

10. The switching device according to claim 9, wherein said first and second optical waveguides are optical fibers.

11. The switching device according to claim 9, wherein said wavelength tunable, wavelength selectable optical component is a Bragg grating.

12. The switching device according to claim 9, wherein said first switch is a 2x2 switch.

13. The switching device according to claim 9, wherein said second switch is a 2x2 switch.

14. The switching device according to claim 9, further comprising:

- (a) a wavelength selector; and
- (b) a wavelength switch actuator.

15. The switching device according to claim 14, wherein said actuator is a heater.

16. The switching device according to claim 14, wherein said actuator is a tension actuator.

17. The switching device according to claim 14, wherein said actuator is a compression actuator.

18. A method of switching optical signals, said method comprising the steps of:

- (a) switching the switching device to a pass through state;
- (b) tuning a wavelength selective optical component to act on a specific signal wavelength; and
- (c) switching the switching device to operate in a drop/ add state.

19. The method according to claim 18, wherein said tuning is actuated through heating, compression, or tensioning.

Year	Country	Year	Country	Year	Country	Year	Country	Year	Country
1990	USA	1990	USA	1990	USA	1990	USA	1990	USA
1991	USA	1991	USA	1991	USA	1991	USA	1991	USA
1992	USA	1992	USA	1992	USA	1992	USA	1992	USA
1993	USA	1993	USA	1993	USA	1993	USA	1993	USA
1994	USA	1994	USA	1994	USA	1994	USA	1994	USA
1995	USA	1995	USA	1995	USA	1995	USA	1995	USA
1996	USA	1996	USA	1996	USA	1996	USA	1996	USA
1997	USA	1997	USA	1997	USA	1997	USA	1997	USA
1998	USA	1998	USA	1998	USA	1998	USA	1998	USA
1999	USA	1999	USA	1999	USA	1999	USA	1999	USA
2000	USA	2000	USA	2000	USA	2000	USA	2000	USA
2001	USA	2001	USA	2001	USA	2001	USA	2001	USA
2002	USA	2002	USA	2002	USA	2002	USA	2002	USA
2003	USA	2003	USA	2003	USA	2003	USA	2003	USA
2004	USA	2004	USA	2004	USA	2004	USA	2004	USA
2005	USA	2005	USA	2005	USA	2005	USA	2005	USA
2006	USA	2006	USA	2006	USA	2006	USA	2006	USA
2007	USA	2007	USA	2007	USA	2007	USA	2007	USA
2008	USA	2008	USA	2008	USA	2008	USA	2008	USA
2009	USA	2009	USA	2009	USA	2009	USA	2009	USA
2010	USA	2010	USA	2010	USA	2010	USA	2010	USA
2011	USA	2011	USA	2011	USA	2011	USA	2011	USA
2012	USA	2012	USA	2012	USA	2012	USA	2012	USA
2013	USA	2013	USA	2013	USA	2013	USA	2013	USA
2014	USA	2014	USA	2014	USA	2014	USA	2014	USA
2015	USA	2015	USA	2015	USA	2015	USA	2015	USA
2016	USA	2016	USA	2016	USA	2016	USA	2016	USA
2017	USA	2017	USA	2017	USA	2017	USA	2017	USA
2018	USA	2018	USA	2018	USA	2018	USA	2018	USA
2019	USA	2019	USA	2019	USA	2019	USA	2019	USA
2020	USA	2020	USA	2020	USA	2020	USA	2020	USA